National Institute of Environmental Health Sciences

Climate change and malaria in Canada: A systems approach

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Abstract:

This article examines the potential for changes in imported and autochthonous malaria incidence in Canada as a consequence of climate change. Drawing on a systems framework, we qualitatively characterize and assess the potential direct and indirect impact of climate change on malaria in Canada within the context of other concurrent ecological and social trends. Competent malaria vectors currently exist in southern Canada, including within this range several major urban centres, and conditions here have historically supported endemic malaria transmission. Climate change will increase the occurrence of temperature conditions suitable for malaria transmission in Canada, which, combined with trends in international travel, immigration, drug resistance, and inexperience in both clinical and laboratory diagnosis, may increase malaria incidence in Canada and permit sporadic autochthonous cases. This conclusion challenges the general assumption of negligible malaria risk in Canada with climate change.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2648659

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Unspecified Exposure

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Non-U.S. North America

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Malaria

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type: ☑

format or standard characteristic of resource

Research Article, Review

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content